

# Exhibit 2

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**COREPHOTONICS, LTD.**

**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN FRANCISCO DIVISION**

COREPHOTONICS, LTD.

**Plaintiff,**

VS.

APPLE INC.

**Defendant.**

Case No. 3:17-cv-06457-JD (Lead Case)  
Case No. 3:18-cv-02555-JD

**PLAINTIFF COREPHOTONICS, LTD.'S  
SECOND AMENDED DISCLOSURE OF  
ASSERTED CLAIMS AND  
INFRINGEMENT CONTENTIONS**

1 Pursuant to Patent Local Rule 3-1 and 3-6 and to the parties' proposed case schedules (Dkt.  
 2 128), Plaintiff Corephotonics, Ltd. ("Corephotonics") submits this Amended Disclosure of  
 3 Asserted Claims and Infringement Contentions.

4 This amended disclosure addresses additional products introduced by Apple subsequent to  
 5 Corephotonics' originalfirst amended infringement contentions served last year in 2018July 2022  
 6 and addresses changes tomerely adds the claims of the '712 patent following the Inter Partes  
 7 Review and Ex Parte Reexamination proceedings brought byiPhone 14 models that Apple-  
 8 released thereafter under the same infringement theories. Corephotonics incorporates by reference  
 9 its Amended Disclosure of Asserted Claims and Infringement Contentions served on July 26, 2022  
 10 in Case No. 3:17-cv-06457 and its Disclosure of Asserted Claims and Infringement Contentions  
 11 in Case No. 17-cv-06457 served on April 11, 2018 and its Disclosure of Asserted Claims and  
 12 Infringement Contentions in Case No. 18-cv-02555 served on May 30, 2018. Corephotonics  
 13 expressly reserves all objections relative to the use of its Disclosures of Asserted Claims and  
 14 Infringement Contentions, for any purpose, and does not waive any applicable privileges with  
 15 respect to the information disclosed herein or document productions made pursuant to Patent Local  
 16 Rules 3-1 and 3-2.

17 In Corephotonics' infringement contentions served on April 11, 2018, Corephotonics  
 18 asserted claims 1, 2, 3, and 4 of U.S. Patent No. 9,538,152 (the "'152 patent"). These claims of the  
 19 '152 patent were found unpatentable by the Patent Trial and Appeal Board in a final written  
 20 decision issued December 2, 2019 in IPR2018-01133. Corephotonics' appeal of this final written  
 21 decision is still pending at the Federal Circuit (Case No. 20-1425). To the extent it is necessary to  
 22 do so in order to preserve Corephotonics' ability to assert the '152 patent in the event that the final  
 23 written decision is reversed, Corephotonics incorporates by reference its infringement contentions  
 24 in Case No. 17-cv-06457 served on April 11, 2018, as they relate to the '152 patent into each  
 25 relevant section below. Corephotonics reserves the right to seek leave for additional amendments  
 26 to its contentions for the '152 patent should the final written decision in IPR2018-01133 be  
 27 reversed.

This disclosure is based on the information available to Corephotonics at this time. The stay in these consolidated cases was only recently lifted, on April 14, 2022 (Dkt. 127), and discovery has only just restarted and is ongoing, fact discovery does not end until November 17, 2023 (Dkt. 175), the Defendant in this case has yet to produce any documents related to its products introduced subsequent to the original amended infringement contentions, and Corephotonics' investigation is ongoing. Corephotonics reserves the right to supplement or amend these disclosures, its contentions in this case, and its document production pursuant to these disclosures including to the full extent consistent with the Federal Rules of Civil Procedure, Local Rules, and Court Orders.

**I. DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT  
CONTENTIONS (P.L.R. 3-1)**

## A. Asserted Claims

Based on information reasonably available to Corephotronics at this time, Corephotronics asserts that Defendant Apple Inc. (“Apple” or “Defendant”) infringes the following claims pursuant to 35 U.S.C. §§ 271(a) and 271(b) (collectively the “Asserted Claims”):

Claims 1, 12, 13, and 19 of U.S. Patent No. 9,568,712 (the “712 patent); and

Claims 1, 2, 3, 4, 5, 6, 7, 10, 12, and 13 of U.S. Patent No. 9,185,291 (the “291 patent”).

## **B. Identification of Accused Instrumentalities**

Based on information reasonably available to Corephotonics at this time. The following is, for each of the Asserted Claims, an identification of each accused apparatus, product, device, process, method, act, or other instrumentality.

Claim 19 of the '712 patent is infringed by the iPhone 7 Plus and iPhone 8 Plus and/or the use of these models.

Claims 1, 12, and 13 of the '712 patent are infringed by the iPhone X, iPhone XS, iPhone XS Max, iPhone 11 Pro, iPhone 11 Pro Max, and iPhone 12 Pro, and/or the use of these models.

Claims 1, 2, 3, 4, 5, 6, 7, 10, 12, and 13 of the '291 patent are infringed by the iPhone 7 Plus and/or the use of this model.

1           Claims 1, 2, 3, 4, 5, 10, 12, and 13 of the '291 patent are infringed by the iPhone 11, iPhone  
 2 11 Pro, iPhone 11 Pro Max, iPhone 12 mini, iPhone 12, iPhone 12 Pro, iPhone 12 Pro Max, iPhone  
 3 13, iPhone 13 mini, iPhone 13 Pro, and iPhone 13 Pro Max, iPhone 14, iPhone 14 Plus, iPhone 14  
 4 Pro, and iPhone 14 Pro Max, and/or the use of these models.

5           Claims 1, 2, 3, 4, 10, 12, and 13 of the '291 patent are infringed by the iPad Pro 11-inch  
 6 (2nd generation), iPad Pro 11-inch (3rd generation), iPad Pro 12.9-inch (4th generation), and iPad  
 7 Pro 12.9-inch (5th generation), and/or the use of these models.

8           Specific Accused Instrumentalities that infringe each of the Asserted Claims are further  
 9 specified in Exhibits A, D, F, G, K, and L.<sup>1</sup> Corephotonics in no way intends that the Accused  
 10 Instrumentalities are limited to the methods and apparatuses that are identified in Exhibits A, D,  
 11 F, G, K, and L. The Accused Instrumentalities specifically include all systems, apparatuses,  
 12 services, and methods of Defendant similar to those identified in these exhibit that include the  
 13 claimed elements.

#### 14           C.     **Direct Infringement**

15           A chart that identifies specifically where and how each limitation of claims 1, 2, 3, 4, 5, 6,  
 16 7, 10, 12, and 13 of the '291 patent is found within the iPhone 7 Plus is attached hereto as Exhibit  
 17 A. This exhibit is unmodified from the Exhibit A Corephotonics served in its April 11, 2018  
 18 infringement contentions.

19           Charts that identify specifically where and how each limitation of claim 19 of the '712  
 20 patent is found within the iPhone 7 Plus and iPhone 8 Plus are attached hereto as Exhibits D and  
 21 F. These exhibits are unmodified from the Exhibits D and F Corephotonics served in its April 11,  
 22 2018 infringement contentions.

23           A chart that identifies specifically where and how each limitation of claims 1, 12, and 13  
 24 of the '712 patent is found within the iPhone X, iPhone XS, and iPhone XS Max is attached hereto  
 25 as Amended Exhibit G. This exhibit is an amended version of the Exhibit G Corephotonics served  
 26 in its May 30, 2018 infringement contentions.

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 28 |<sup>1</sup> All references to Exhibit L refer to amended Exhibit L.

1 A single chart is provided for the iPhone X, iPhone XS, and iPhone XS Max because each  
2 contains substantially the same accused lens assembly. For example, Apple describes the rear  
3 “telephoto” lens assembly in each model as a “6-element lens” with F# of  $f/2.4$  and used with a 12  
4 megapixel sensor:

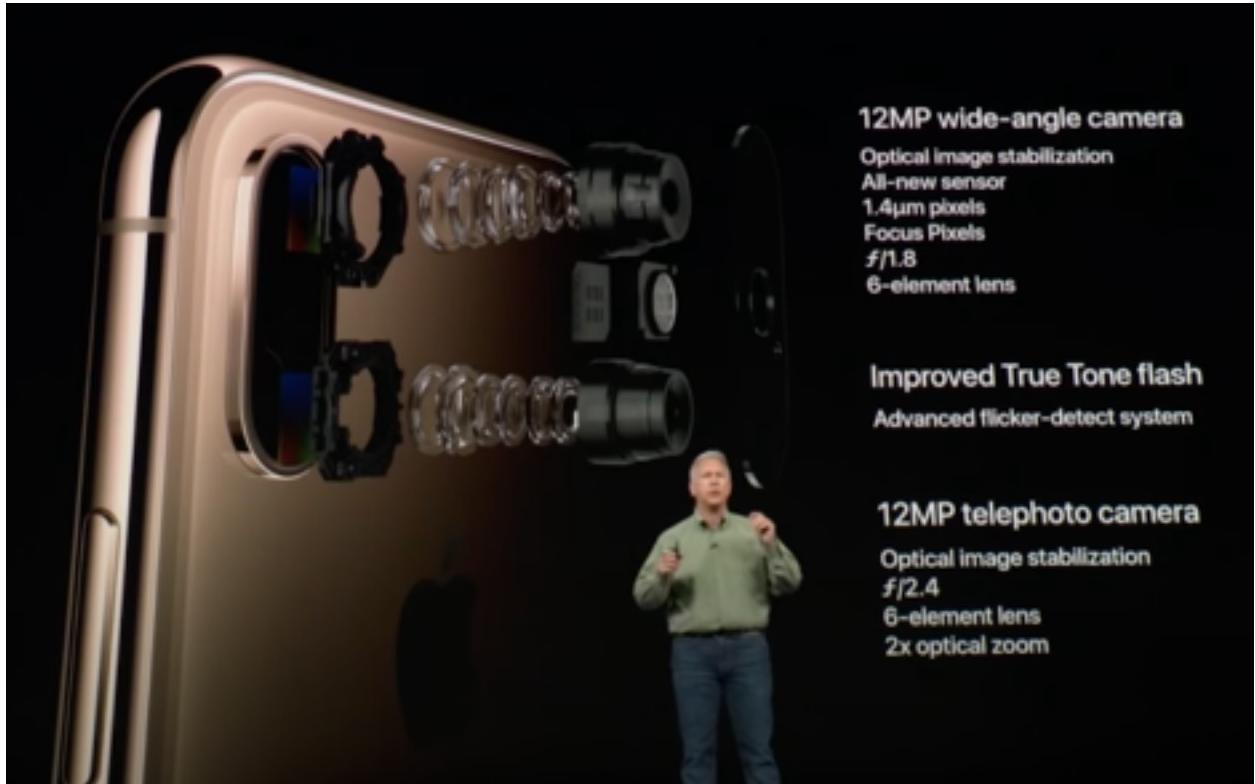
5 **Camera**

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- 7 ▪ 12MP wide-angle and telephoto cameras
  - 8 ▪ Wide-angle:  $f/1.8$  aperture
  - 9 ▪ Telephoto:  $f/2.4$  aperture
  - 10 ▪ Optical zoom; digital zoom up to 10x
  - 11 ▪ Portrait mode
  - 12 ▪ Portrait Lighting (beta)
  - 13 ▪ Dual optical image stabilization
  - 14 ▪ Six-element lens

15 (“iPhone X – Technical Specifications,” [https://support.apple.com/kb/sp770?locale=en\\_US](https://support.apple.com/kb/sp770?locale=en_US))



16 (“Apple iPhone X – Full Announcement,” <https://www.youtube.com/watch?v=Umy1GN3rIJQ> at  
17 22:15)  
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13 (“Apple iPhone XS – Full Announcement,” <https://www.youtube.com/watch?v=QcfO6cIyjKgat12:50>)

15 Moreover the “telephoto” lens assemblies in the iPhone X, XS, and XS Max products have  
 16 the same focal length. Each has substantially the same sized 1/3.4" image sensor, with 4032 x 3024  
 17 pixels and a 1-micron pixel pitch (*see* [https://www.gsmarena.com/apple\\_iphone\\_x-review-1681p8.php](https://www.gsmarena.com/apple_iphone_x-review-1681p8.php), [https://www.phonearena.com/phones/Apple-iPhone-XS\\_id10766](https://www.phonearena.com/phones/Apple-iPhone-XS_id10766),  
 18 <https://www.dxomark.com/apple-iphone-xs-max-review-flagship-imaging-power/>), and each  
 19 product reports an equivalent focal length of 51mm:  
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	IPHONE X	IPHONE XS
	REAR FACING CAMERA: WIDE ANGLE	
Minimum/Maximum exposure	1/91000s minimum, 1/3s maximum	<b>1/22000s minimum, 1s maximum</b>
Minimum/Maximum ISO	22 ISO minimum, 2112 ISO maximum	<b>24 ISO minimum, 2304 ISO maximum</b>
Image output size	4032 × 3024 pixels	4032 × 3024 pixels
Focal length	28mm equivalent	<b>26mm equivalent</b>
Autofocus systems	Phase, Contrast	Phase, Contrast
Flash	Truetone multi-LED flash	Truetone multi-LED flash
Aperture	f/1.8	f/1.8

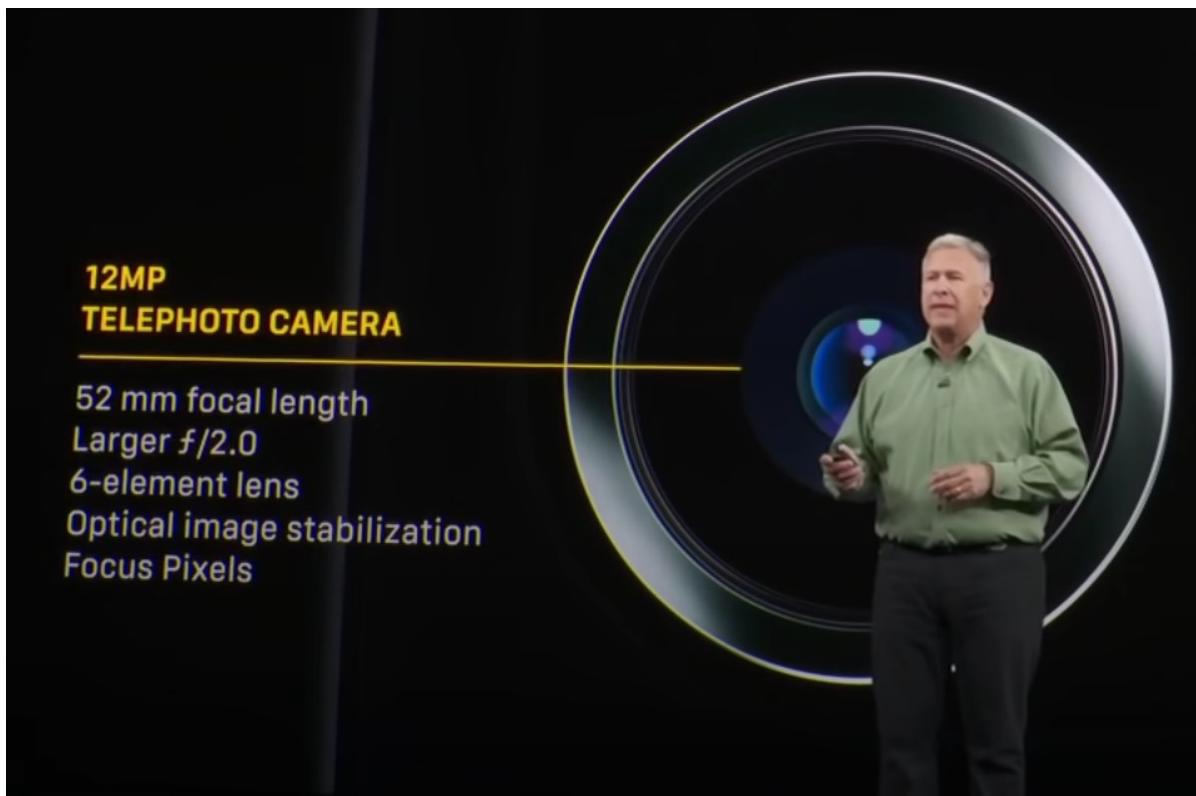
  

	REAR FACING CAMERA: TELEPHOTO	REAR FACING CAMERA: TELEPHOTO
Minimum/Maximum exposure	1/91000 minimum, 1/3s maximum	<b>1/45000 minimum, 1/3s maximum</b>
Minimum/Maximum ISO	15 ISO minimum, 1200 ISO maximum	<b>15 ISO minimum, 1440 ISO maximum</b>
Image output size	4032 × 3024 pixels	4032 × 3024 pixels
Focal length	51mm equivalent	51mm equivalent
Autofocus systems	Phase, Contrast	Phase, Contrast
Flash	Truetone multi-LED flash	Truetone multi-LED flash
Aperture	f/2.4	f/2.4

(<https://lux.camera/iphone-xs-vs-iphone-x-the-camera-hardware-changes/>). Cameras with the same sensor size and same equivalent focal length will have the same actual focal length. It is reasonable to infer from the fact that the iPhone XS and XS Max, which are marketed as an incremental update to the iPhone X product, contain a telephoto lens assembly with the same number of lens elements, same focal length, and same aperture, serving the same function and used with a substantially similar camera sensor, that the iPhone X, XS, XS Max each infringe claims 1, 12, and 13 of the '712 patent in the same way.

A chart that identifies specifically where and how each limitation of claims 1, 12, and 13 of the '712 patent is found within the iPhone 11 Pro, iPhone 11 Pro Max, and iPhone 12 Pro is attached hereto as Exhibit K.

1 A single chart is likewise provided for the iPhone 11 Pro, iPhone 11 Pro Max, and iPhone  
2 12 Pro because each contains substantially the same accused lens assembly. For example, Apple  
3 describes the rear “telephoto” lens assembly in each model as a “6-element lens” with F# of  $f/2.0$ ,  
4 52 mm equivalent focal length, and used with a 12 megapixel sensor:



18 (“September Event 2019 – Apple,” <https://www.youtube.com/watch?v=-rAeqN-Q7x4> at 1:17:00)  
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11 (“Apple Event – October 13 [2020],” <https://www.youtube.com/watch?v=KR0g-1hnQPA> at  
12 50:00)

13 Moreover the “telephoto” lens assemblies in the iPhone 11 Pro, iPhone 11 Pro Max, and  
14 iPhone 12 Pro products have the same focal length. Each has substantially the same sized 1/3.4”  
15 image sensor, with 12 megapixels and a 1-micron pixel pitch (see  
16 <https://www.dxomark.com/updated-apple-iphone-11-pro-max-camera-review-still-an-excellent-imaging-option/>,  
17 <https://www.dxomark.com/apple-iphone-12-pro-camera-review-great-smartphone-video/>), and each product is described as having an equivalent focal length of 52mm.

18  
19 Cameras with the same sensor size and same equivalent focal length will have the same  
20 actual focal length. It is reasonable to infer from the fact that the iPhone 12 Pro, which is the  
21 immediate successor product to the iPhone 11 Pro, contains a telephoto lens assembly with the  
22 same number of lens elements, same focal length, and same aperture, serving the same function  
23 and used with a substantially similar camera sensor, that the iPhone 11 Pro, 11 Pro Max, and 12  
24 Pro each infringe claims 1, 12, and 13 of the ’712 patent in the same way.

25 A chart that identifies specifically where and how each limitation of claims 1, 2, 3, 4, 5,  
26 10, 12, and 13 of the ’291 patent is found within the iPhone 11, iPhone 11 Pro, iPhone 11 Pro Max,  
27 iPhone 12 mini, iPhone 12, iPhone 12 Pro, iPhone 12 Pro Max, iPhone 13, iPhone 13 mini, iPhone  
28 13 Pro, iPhone 13 Pro Max, iPhone 14, iPhone 14 Plus, iPhone 14 Pro, iPhone 14 ProMax (the

1       “iPhone Accused Ultra Wide / Wide Products”), and where and how each limitation of claims 1,  
2       2, 3, 4, 10, 12, and 13 of the ’291 patent is found within the iPad Pro 11-inch (2nd generation),  
3       iPad Pro 11-inch (3rd generation), iPad Pro 12.9-inch (4th generation), and iPad Pro 12.9-inch (5th  
4       generation) (the “iPad Accused Ultra Wide / Wide Products” together with the iPhone products  
5       the “Accused Ultra Wide / Wide Products”) is attached hereto as Exhibit L.

6                  A single chart is provided for the iPhone 11, iPhone 11 Pro, iPhone 11 Pro Max, iPhone  
7       12 mini, iPhone 12, iPhone 12 Pro, iPhone 12 Pro Max, iPhone 13, iPhone 13 mini, iPhone 13 Pro,  
8       iPhone 13 Pro Max, iPhone 14, iPhone 14 Plus, iPhone 14 Pro, iPhone 14 ProMax, iPad Pro 11-  
9       inch (2nd generation), iPad Pro 11-inch (3rd generation), iPad Pro 12.9-inch (4th generation), and  
10      iPad Pro 12.9-inch (5th generation) because each infringes the ’291 patent in substantially the same  
11      way. Each contains a rear camera module including what Apple designates an “ultra wide” camera  
12      and a “wide” or “main” camera. Each utilizes the same or substantially similar iOS (or its  
13      rebranded variant iPadOS) software to operate these cameras in the manner that infringes the ’291  
14      patent. With the exception of claim 5, the differences among the hardware of the various Accused  
15      Ultra Wide / Wide Products do not significantly affect how they infringe the ’291 patent.

16                  **D. Indirect Infringement**

17                  The following are descriptions of Apple’s inducement of infringement of the Asserted  
18      Claims by others pursuant to Patent L.R. 3-1(d). These descriptions are based on the information  
19      reasonably available to Corephotonics at this time. Discovery is ongoing, Corephotonics  
20      investigation continues, and Corephotonics reserves the right to amend or supplement its  
21      contentions of indirect infringement.

22                  Induced Infringement of the Asserted Claims of the ’291 patent

23                  Apple manufactures, uses, imports, offers for sale, and/or sells the Accused Products with  
24      knowledge of or willful blindness to the fact that its actions will induce Apple’s customers and  
25      end users to infringe the ’291 patent by using the dual-aperture and/or triple-aperture camera on  
26      the Accused Products.

27                  Apple actively and knowingly induces its customers and end users to infringe the ’291  
28      patent by publishing information promoting the dual-aperture camera of the Accused Products,

1 and by providing its customers and end users with instructions for using that camera. For example,  
2 Apple highlighted the benefits of the dual-aperture camera when it introduced the iPhone 7 Plus.  
3 *See, e.g.,*

- 4     • “Apple – September Event 2016,” [https://www.youtube.com/watch?v=NS0txu\\_Kzl8](https://www.youtube.com/watch?v=NS0txu_Kzl8) at  
5       1:08:22, and  
6     • “Apple – Introducing iPhone 7,” <https://www.youtube.com/watch?v=Q6dsRpVyyWs> at  
7       1:05.

8              Apple further encourages the use of the continuous zoom feature for a dual-aperture camera  
9 pertaining to the Asserted Claims of the '291 patent by customers and developers of software that  
10 use the dual-aperture camera of the iPhone 7 Plus its employees providing descriptions of these  
features in online forums and at public presentations, *see, e.g.,* as disclosed in Exhibit A.

11              Apple has continued to provide such instructions and encouragement in subsequent  
12 products, including the Accused Ultra Wide / Wide Products. *See, e.g.,*

- 13     • “September Event 2019 – Apple,” <https://www.youtube.com/watch?v=-rAeqN-Q7x4> at  
14       50:52.  
15     • “Introducing iPhone 14 Pro | Apple,”  
16       <https://www.youtube.com/watch?v=FT3ODSg1GFE> at 1:20.  
17     • “A guide Tour of iPhone 14 & iPhone 14 Pro | Apple,”  
18       <https://www.youtube.com/watch?v=cgpSBjWutGY> at 1:50.

19              Apple specifically advertises “2x optical zoom out” for both still and video use as a feature  
20 of each of the Accused Ultra Wide / Wide Products, further encouraging customers to use the  
21 infringing features of these products. *See, e.g.,* <https://www.apple.com/iphone-11/specs/>,  
22 <https://www.apple.com/iphone-12/specs/>, <https://www.apple.com/iphone-13/specs/>,  
23 <https://www.apple.com/iphone-13-pro/specs/>, <https://www.apple.com/iphone-14/specs/>,  
<https://www.apple.com/iphone-14-pro/specs/>, <https://www.apple.com/ipad-pro/specs/>.

24              Further, whenever any user of the iPhone 7 Plus has operated or operates the dual-aperture  
25 camera of the iPhone 7 Plus to zoom in or zoom out, to zoom factors in which the wide-angle, or  
26 telephoto lens, or both providing the image using the software and user interface provided by Apple  
27 for the iPhone 7 Plus, for example by zooming across a 2X zoom, the method of claims 12 and 13  
28 the '291 patent has been or is performed by use of the iPhone 7 Plus.

1           Further, whenever any user of any Accused Ultra Wide / Wide Products has operated or  
 2 operates the multi-aperture camera of such a product to zoom in or zoom out, to zoom factors in  
 3 which the “ultra wide” lens, or “wide” lens, or both providing the image using the software and  
 4 user interface provided by Apple for the Accused Ultra Wide / Wide Products, for example by  
 5 zooming across a 2X zoom, the method of claims 12 and 13 the ’291 patent has been or is  
 6 performed by use of the Accused Ultra Wide / Wide Products.

7           Induced Infringement of the Asserted Claim of the ’712 patent

8           Apple manufactures, uses, imports, offers for sale, and/or sells the Accused Products with  
 9 knowledge of or willful blindness to the fact that its actions will induce Apple’s customers and  
 10 end users to infringe the ’712 patent by using the telephoto lens on the Accused Products.

11          Apple actively and knowingly induces its customers and end users to infringe the ’712  
 12 patent by publishing information promoting the zoom features of the Accused Products, and by  
 13 providing its customers and end users with instructions for using those features. For example,  
 14 Apple highlighted the benefits of the telephoto lens when it introduced the iPhone 7 Plus. *See, e.g.,*

- 15          • “Apple – September Event 2016,” [https://www.youtube.com/watch?v=NS0txu\\_Kzl8](https://www.youtube.com/watch?v=NS0txu_Kzl8) at  
                  1:08:22, and
- 16          • “Apple – Introducing iPhone 7,” <https://www.youtube.com/watch?v=Q6dsRpVyyWs> at  
                  1:05.

18          Apple likewise actively and knowingly induces its customers and end users to infringe the  
 19 ’712 patent by publishing information promoting the zoom features of the iPhone X, XS, XS Max,  
 20 11 Pro, 11 Pro Max, and 12 Pro, and by providing its customers and end users with instructions  
 21 for using those features. For example, Apple touts its telephoto lens in the product description for  
 22 the iPhone X. *See* <https://www.apple.com/iphone-x/>. As another example, Apple provides how-to  
 23 video tutorials on photography, which include one on “How to compose with telephoto camera”  
 24 using the iPhone 7+, iPhone 8+, and the iPhone X. *See*  
 25 <https://www.apple.com/iphone/photography-how-to/>. Apple has continued to tout its telephoto  
 26 lenses and encourage their use in subsequent products, including for example in the product  
 27 announcement videos cited in section I.C above.

1                   **E.     Literal Infringement and Doctrine of Equivalents**

2                   Corephotonics contends that each element of the Asserted Claims is literally present in or  
 3                   practiced by the Accused Products, as set forth in the charts attached hereto as Exhibits A, D, F,  
 4                   G, K, and L.

5                   In the alternative, Corephotonics also contends that the iPhone 11, iPhone 11 Pro, iPhone  
 6                   11 Pro Max, iPhone 12, iPhone 12 mini, iPhone 12 Pro, iPhone 12 Pro Max, iPhone 13, iPhone 13  
 7                   mini, iPhone 13 Pro, iPhone 13 Pro Max, iPhone 14, iPhone 14 Plus, iPhone 14 Pro, iPhone 14  
 8                   ProMax, iPad Pro 11-inch (2<sup>nd</sup> generation), iPad Pro 11-inch (3<sup>rd</sup> generation), iPad Pro 12.9-inch  
 9                   (4<sup>th</sup> generation), and iPad Pro 12.9-inch (5<sup>th</sup> generation) infringe the '291 patent under the doctrine  
 10                  of equivalents, as set forth in Exhibit L. For example, to the extent that Apple contends that the  
 11                  cameras that it describes in marketing materials as the "ultra wide" and the "wide" or "main"  
 12                  cameras do not satisfy the claimed "Wide imaging section that includes a fixed focal length Wide  
 13                  lens with a Wide field of view (FOV)" and "Tele imaging section that includes a fixed focal length  
 14                  Tele lens with a Tele FOV that is narrower than the Wide FOV" limitations, these limitations are  
 15                  satisfied under the doctrine of equivalents. The "wide" or "main" camera has a narrower field of  
 16                  view than the "ultra wide" camera, and the products that include these two cameras are built and  
 17                  operate in a way that is insubstantially different from the claimed invention, even though Apple's  
 18                  marketing materials may describe the cameras using different terms than the asserted claims.  
 19                  Moreover, the presence of an additional camera that Apple describes as "telephoto" in some of the  
 20                  accused products does not alter the fact that the "ultra wide" and "wide" cameras are  
 21                  insubstantially different from the claimed invention.

22                  Likewise, to the extent that Apple contends that the Accused Ultra Wide / Wide Products  
 23                  do not literally infringe limitations of element 1(c) or element 12(b) of the '291 patent, because  
 24                  there are some circumstances where the product exhibits different or additional behavior to the  
 25                  behavior recited in the claim, these products still infringe under at least the doctrine of equivalents,  
 26                  as they perform substantially the claimed behavior under typical and intended usage scenarios.

27                  Apple has not yet made any contention that it does not infringe the Asserted Claims, nor is  
 28                  the process of proposing constructions for any of the terms in the Asserted Claims complete. To

1 the extent Apple contends non-infringement or proposes claim constructions as the basis for its  
2 contention of non-infringement, Corephotonics reserves the right to supplement or amend its  
3 infringement contentions, including by contending that the elements are present under the doctrine  
4 of equivalents, as mapped in Exhibits A, D, F, G, K, and L.

5 **F. Priority Date of Asserted Claims**

6 Each Asserted Claim of the '291 patent is entitled to a priority date at least as early as the  
7 effective filing date of the '568 patent pursuant to 35 U.S.C. § 100(i): June 13, 2013.

8 Each Asserted Claim of the '712 patent is entitled to a priority date at least as early as the  
9 effective filing date of the '712 patent pursuant to 35 U.S.C. § 100(i): July 4, 2013.

10 **G. Identification of Instrumentalities that Practice the Claimed Invention**

11 Corephotonics makes no identification of instrumentalities pursuant to Patent L.R. 3-1(g)  
12 at this time. Discovery is ongoing, Corephotonics' investigation is continuing, and Corephotonics  
13 reserves the right to supplement or amend this disclosure to the full extent consistent with the  
14 Federal Rules of Civil Procedure, Local Rules, and Court Orders.

15 **H. Timing of First Infringement and Damages**

16 Based on the information reasonably available to it at this time, Corephotonics identifies  
17 the point of first infringement of all asserted claims of the '291 patent and the start of claimed  
18 damages as September 7, 2016, the date the Apple iPhone 7 Plus was publicly announced, placed  
19 on sale, and demonstrated to the public. The infringement of the asserted claims of the '291 patent  
20 is ongoing, and the claimed damages period is ongoing.

21 Based on the information reasonably available to it at this time, Corephotonics identifies  
22 the point of first infringement of the '712 patent by Apple as the date of its issue, February 14,  
23 2017. The Apple iPhone 7 Plus was on sale and infringing claims 19 as of that date. On information  
24 and belief, Apple further had actual notice of U.S. Patent Publication 2016/0291293, containing  
25 the claims that ultimately issued in the '712 patent, between its publication on October 6, 2016  
26 and the date the '712 patent issued. Thus, Corephotonics is entitled to damages for infringement  
27 of its provisional rights pursuant to 35 U.S.C. § 154(d) for the period of time between when Apple  
28 had actual notice and February 14, 2017. Further, on information and belief, Apple was infringing

1 claims 1, 12, and 13 of the '712 patent as early as February 14, 2017, for example, in the course  
 2 of its use of prototype iPhone X products and camera modules in the internal testing and  
 3 development work that Apple performed prior to that date that the iPhone X was put on public  
 4 sale. The infringement of the asserted claims of the '712 patent is ongoing, and the claimed  
 5 damages period is ongoing. Further, on information and belief, the iPhone 14, iPhone 14 Pro, and  
 6 iPhone 14 ProMax were released for sale on September 16, 2022, and the iPhone 14 Plus was  
 7 released for sale on October 7, 2022. On information and belief, Apple's use of the iPhone 14  
 8 series for internal testing and development precedes these sale dates.

9 Discovery is ongoing and Corephotonics' investigation continues. Accordingly,  
 10 Corephotonics reserves the right to amend and supplement its identification of the timing of  
 11 Apple's infringement and the start of claimed damages.

12 **I. Willful Infringement**

13 For years prior to introducing its products in the marketplace, Apple expressed repeated  
 14 and substantial interest in Corephotonics' technology and intellectual property relating to the  
 15 hardware and software to enable dual-aperture mobile phone cameras capable of optical zoom.  
 16 Apple knew, or was at least willfully and deliberately blind, to Corephotonics' patents relating to  
 17 this technology, including the Asserted Patents. Instead of working with Corephotonics to access  
 18 its technology and intellectual property, Apple has marketed products infringing the Asserted  
 19 Patents in wanton disregard of Corephotonics' patent rights. Apple introduced the Apple iPhone 7  
 20 Plus after the '291 patent issued and after U.S. Patent No. 9,402,032, which shares a specification  
 21 with the '712 patent, issued. Apple subsequently introduced numerous additional infringing  
 22 models and has continued to unlawfully infringe even after Corephotonics filed its original  
 23 Complaint on November 7, 2017.

24 The basis for Corephotonics' allegations of willful infringement of each Asserted Patent is  
 25 described in summary, including examples of Corephotonics' interactions with and presentations  
 26 to Apple, as well as Apple's investigation and analysis of Corephotonics' patents in connection  
 27 with Apple's prosecution of its own patent applications, in Corephotonics' First Amended  
 28 Complaint in Case No. 17-cv-06457, filed on April 11, 2018, which is incorporated herein by

1 reference, including the factual allegations described in Paragraphs 22 through 44, and in  
 2 Corephotonics' Complaint in Case No. 18-cv-02555, filed on April 30, 2018, which is incorporated  
 3 herein by reference, including the factual allegations and description of the grounds for allegations  
 4 of willful infringement described in Paragraphs 12-41 and 45-47.

5 Further evidence of Apple's willful infringement is found in that fact that it has continued  
 6 to infringe the '291 and '712 patents, even after IPR2018-01348 challenging the '291 patent was  
 7 denied institution on February 4, 2019 and rehearing was denied on August 5, 2019, after IPR2018-  
 8 01356 challenging the '712 patent was denied institution on February 5, 2019, after the final  
 9 written decision affirming the patentability of the asserted '712 patent claims was issued on  
 10 December 4, 2019 and affirmed by the Federal Circuit on June 23, 2021, and after Apple's request  
 11 for reexamination of the '712 patent was denied by the Patent Office on February 14, 2022.

12 Further, Apple's willful infringement is further evidenced by its continued release of new  
 13 iPhone models that infringe the asserted patents a same or substantially similar infringement theory  
 14 alleged for previous generation iPhones. Apple received notice of the patents and infringement  
 15 theories via this lawsuit and via infringement contentions, but Apple continued to release new  
 16 infringing iPhone models thereafter.

17 Corephotonics' investigation is ongoing, and many of the facts pertaining to Apple's  
 18 willful infringement will be found in documents and information in the possession, custody, and  
 19 control of Apple and third parties.

20 **II. DOCUMENT PRODUCTION ACCOMPANYING DISCLOSURE**

21 Corephotonics has previously produced documents required by Patent L.R. 3-2.  
 22 Corephotonics incorporates by reference its Disclosure of Asserted Claims and Infringement  
 23 Contentions in Case No. 17-cv-06457 served on April 11, 2018 and its Disclosure of Asserted  
 24 Claims and Infringement Contentions in Case No. 18-cv-02555 served on May 30, 2018, its  
 25 Amended Disclosure of Asserted Claims and Infringement Contentions served on July 26, 2022,  
 26 its Patent L.R. 3-8 damages contentions in Case No. 17-cv-06457 served on July 18, 2018, and its  
 27 Patent L.R. 3-8 damages contentions in Case No. 18-cv-02555 served on October 17, 2018 for  
 28 identification of documents that correspond to each category listed in Patent L.R. 3-2.

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2 DATED: July 26, 2022  
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Respectfully submitted,  
RUSS, AUGUST & KABAT

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## **CERTIFICATE OF SERVICE**

I certify that counsel of record is being served on August 2, 2023, with a copy of this document via Electronic Mail on this date.

/s/ Neil Rubin

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